

THE PEACH BEETLE, *COTINIS MUTABILIS* (GORY AND PERCHERON),
IN CALIFORNIA (COLEOPTERA: SCARABAEIDAE)

M. W. STONE¹

131 Sir Damas Dr., Riverside, California 92507

A scarabaeid, *Cotinis mutabilis* Gory and Percheron, also known as *C. texana* Casey, or the peach or fig beetle, belonging to the subfamily Cetoniinae (Ritcher, 1945), has for years been a destructive pest of peaches, figs and grapes in southern California.² The larvae of *Cotinis nitida* (Linnaeus), the green June beetle, severely damages young plants in tobacco beds, lawns, and golf fairways by burrowing and forming mounds of dirt on the surface (Allen and Creighton, 1962). Larvae of the genus *Euphoria* have similar habits and the adults also damage fruit and corn in the eastern states (Ting, 1934). The writer became interested in these insects because of the habit of the larvae, when tunneling or on the soil, of crawling on their backs, despite the presence of 3 pairs of thoracic legs. A brief description of the various stages of *C. mutabilis* and notes on their periods of activity in the Riverside area follows.

Egg (Fig. 1A).—Sixty-one *C. mutabilis* eggs deposited during the period August 6 to 13, 1979 hatched between August 15 and 26, for an average duration of the egg stage of 12.4 days. The time required for hatching outdoors varied from 9 to 17 days. The eggs are whitish and large (2.1 by 2.6 mm) and easily detectable in the soil.

Larva (Fig. 1B, C).—Newly hatched larvae are whitish with brownish head and legs. With plentiful food they develop rapidly and reach a size of 12 to 50 mm prior to pupation. The first two instars are usually completed by fall and completion of the third stage occurs in the spring of the second year. These larvae are known as "back crawlers." Nichol (1935) describes the movement of *Cotinis* larvae as an undulating motion of the entire body, the propellent being the motion of transverse rows of stiff, short, stout bristles on the dorsum of the thoracic region.

Pupa (Fig. 1D, E).—The pupa may be found in an earthen case constructed by the mature larva. The case may vary in size depending upon the size of the pupa and whether male or female. Measurements of 7 pupae showed an average size of 15 by 25 mm. In a group of reared larvae, nine pupated in the period June 12 to July 4. The duration of the pupal period ranged from 25 to 27 days. Pupation outdoors may occur from early May up until August. Newly formed pupae are whitish, becoming cream colored

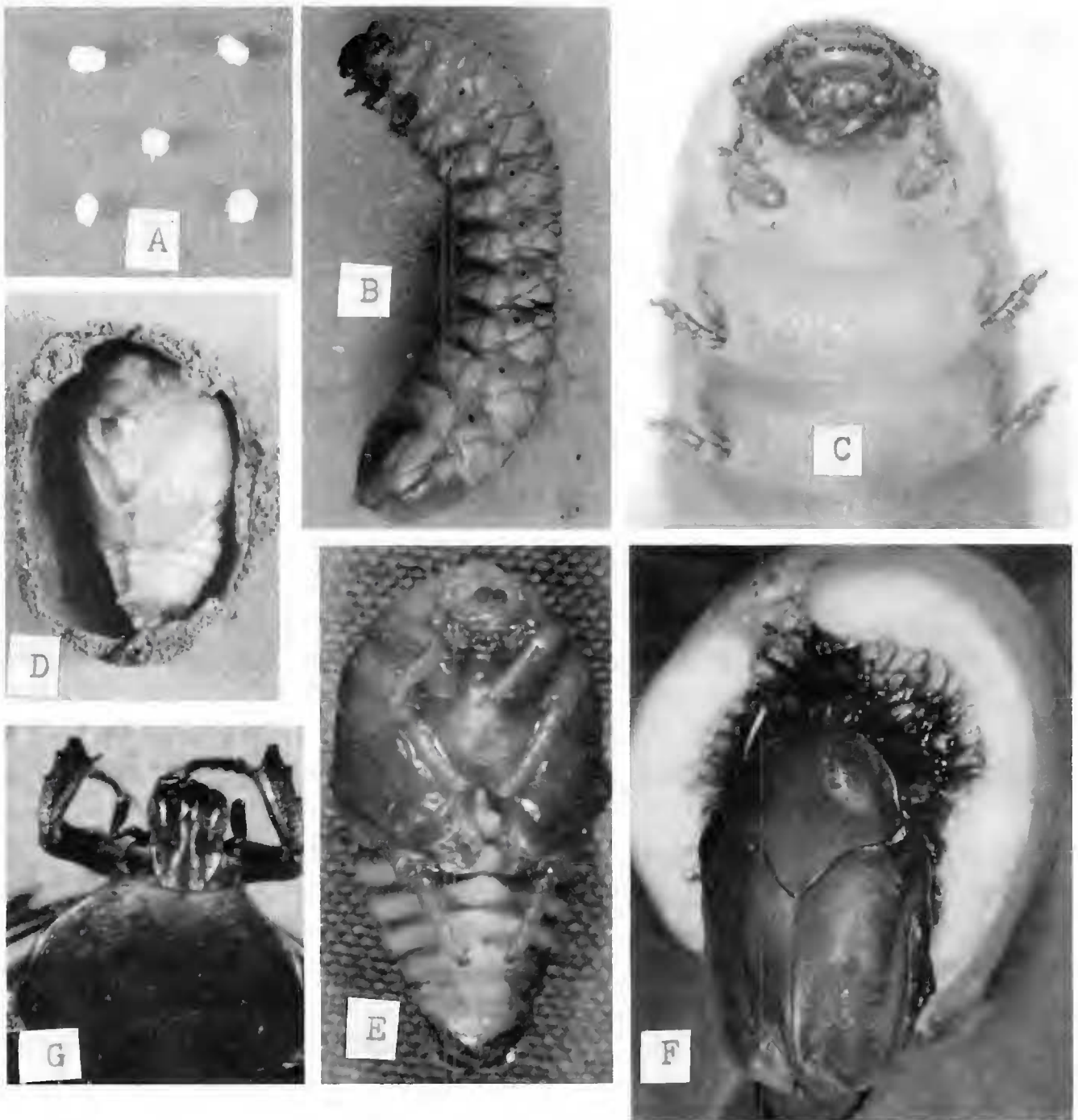


Fig. 1. *Cotinis mutabilis*. A, eggs. B, third stage larva. C, thoracic legs on larva, never used for locomotion. D, pupa in earthen case. E, pupa. F, adult feeding on fig. G, clypeal horn used to penetrate hard skinned fruits.

as they mature. Traces of green later appear on the elytra, head and other exterior parts.

Adult (Fig. 1F, G).—Except for an outer brownish edge the elytra of the newly emerged beetle are greenish in color. The head is a more reddish green and the legs a bright green. Female adults are larger, averaging 17 by 25 mm, as compared with 13 by 22 mm for males. The beetles are equipped with a clypeal horn which is used for puncturing the skin of hard-skinned fruits. Adults collected by the writer and in the U.C. Riverside collection

showed beetles present in the field from the latter part of June and until the middle of November. The peak of emergence occurred in July–August.

The life of adults will vary depending upon the type of cages used and food furnished. Those reared on figs in large glass jars remained alive from 30 to 55 days, whereas when confined in 4 oz. salve tins in soil with grapes some mortality occurred after 11 days. Egg-laying females are especially attracted to compost and manure piles.

Literature Cited

- Allen, N., and C. S. Creighton. 1962. Controlling green June beetle larvae in tobacco beds. U.S. Dep. Agric. Leaflet. 504:1–4.
- Nichol, A. A. 1935. A study of the fig beetle, *Cotinis texana* Casey. Univ. Ariz. Agric. Exp. Stn. Tech. Bull., 55:157–198.
- Ritcher, P. O. 1945. North American Cetoniinae with descriptions of larvae and keys to genera and species (Coleoptera: Scarabaeidae). Ky. Agric. Exp. Stn. Bull., 476:1–39.
- Ting, P. C. 1934. Back-crawling scarabaeid grubs (*Potosia affinis* Anderesch) intercepted in quarantine at San Francisco. Mon. Bull. Calif. Dep. Agric., 13:185–191.

Footnotes

¹ Collaborator—USDA-SEA AR. Boyden Entomological Laboratory. Deceased March 28, 1982.

² L. D. Anderson, U.C. Riverside, collected larvae in compost in April 1949. Adults in U.C.R. Museum collection collected in August 1955 by A. L. Melander. Max Peterson and F. E. Jorgenson, Riverside Lawn Bowling Club, collected adults in August–September 1977–1980.